



Program Highlights

Benefits/Cost Savings

- \$242,630 cost savings for construction phase
- 61% recycling rate for construction phase
- 2,730 tons recycled

Materials Recycled

- 2,054 tons of concrete/concrete masonry units
- 150 tons of rebar
- 123 tons of misc. metal
- 181 tons of wood
- 222 tons of drywall
- 10 tons of cardboard

Project Statistics

- Budget: \$102 million
- Size: 600,000 square feet
- Washington State's largest construction project, 96-97
- Location: Kent, WA

General Contractor

Hensel Phelps Construction Co.
2107 N. First Street, Suite 101
San Jose, CA 95131
(408) 452-1800



Elizabeth Hill, King County engineer (left), wrote the recycling specifications and Ed Crumet, Hensel Phelps Construction Company general superintendent (right), implemented them. Their efforts, along with the subs and recycling haulers, resulted in a very successful job-site recycling program.

Skeptics Save \$242,630 With Job-site Recycling

Management for Hensel Phelps Construction Company admit they |were skeptical that implementing job-site recycling would be worth the effort. They were working on the state's largest project of the year, the Regional Justice Center, a 600,000 sq. ft. masonry and steel court house and detention facility on a 19-acre site, with 450 workers at the peak. King County's job-site recycling requirement was an additional challenge to an already daunting job.

Yet Hensel Phelps designed innovative and successful waste management strategies, and they're ready to do it again. What went right?

"The initial reason we did recycling was because King County required it. Looking back, it was a big success, both financially and morally."

— Ed Crumet, Superintendent,
Hensel Phelps Construction Co.

Reducing Waste Not Wasting Time

Convenient Recycling. When asked about time lost separating wastes, Ed Crumet, General Superintendent, responded that little if any extra time was needed because sorting was not necessary. Generally subs worked with one

material at a time, so that all the material could be cleaned out into one dumpster, just like on any other job.

The project subs agreed to recycle, but it had to be as convenient as possible. That meant placing recycling dumpsters as close to the work as possible. Hensel Phelps used three times as many dumpsters as on a non-recycling job, a lot to keep track of on a 19-acre site. Maps were made of dumpster locations so haulers could be shown exactly where to find their dumpsters. Subs helped plan convenient dumpster locations for the different construction phases.

Narrow Corridors. A job-site recycling challenge at the Regional Justice Center was posed by the fact that it is a security facility. The detention center has long, narrow corridors that could not accommodate regular sized dumpsters. Instead, Hensel Phelps used large tilt-hoppers (garbage cans on wheels) that could be maneuvered through the corridors. These smaller "dumpsters" were emptied into larger dumpsters placed in loading docks throughout the detention area.

Tracking Wastes. According to Stewart Grauer, Project Manager, tracking the amounts and types of materials being recycled and disposed was well worth the effort. "It helps us make accurate estimates and bids and makes us more competitive – and it took very little time. We will definitely do it again."

Accomplishments

Hensel Phelps kept 2,730 tons of waste out of the landfill, and saved nearly \$250,000 on their first job-site recycling effort. They found that the skills and experience they'd honed from years of looking for ways to cut waste and save time, combined with King County's many recycling services, made for a hugely successful effort.

King County Offers Free Technical Assistance to Construction, Demolition and Landclearing Contractors

- Assistance developing comprehensive job-site waste management plans
- *Construction/Recycling Directory* - a listing of area recyclers
- *Contractors' Guide to Preventing Waste and Recycling* - a how-to guide
- Case studies highlighting successful job-site programs
- *WasteSpec** - a manual of model specifications for construction waste reduction, reuse and recycling. This manual provides architects and engineers model specification language for job-site recycling.
- Examples of contract language specifying recycling and waste management requirements from job-sites throughout King County
- Green Works/Construction Works public recognition program

* Developed by Triangle J Council of Governments; cost \$25.00

**Call the King County Solid Waste Division
at (206) 296-8480 for assistance.**

For more information:

King County

*King County Construction
Recycling Directory*
and other technical assistance:
Theresa Koppang
*King County
Solid Waste Division*
(206) 296-8480

City of Seattle

*Business and Industry
Recycling Venture*
(206) 389-7304

General Contractor

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Stewart Grauer, Project Mgr.
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(408) 452-1800

Client Contact

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Case Study Consultants

O'Brien & Company
(206) 842-8995

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